

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (*Currently Amended*) A method of hermetically packaging an electronic device ~~(8)~~, in an enclosure ~~(2)~~ comprising mutually inter-engageable first and second housing members ~~(4, 6)~~, comprising the steps of

- (i) securing the electronic device ~~(8)~~ to the first housing member ~~(4)~~,
- (ii) engaging the first and second housing members ~~(4, 6)~~ such that an hermetic seal is provided there between,

wherein the engagement step is performed in a controlled atmosphere.

2. (*Currently Amended*) A method according to claim 1 wherein the first housing member ~~(4)~~ comprises a base portion ~~(10)~~, to which the electronic device ~~(8)~~ is secured during the securing step, and an engagement portion adapted to engage with the second housing member ~~(6)~~, and wherein the method further comprises the step of attaching the base portion ~~(10)~~ to the engagement portion prior to engaging the first and second housing members ~~(4, 6)~~.

3. (*Currently Amended*) A method according to claim 1 ~~or 2~~ wherein the first and second housing members ~~(4, 6)~~ are adapted to inter-engage to form an interference fit there between, said interference fit providing the hermetic seal.

4. (*Currently Amended*) A method according to claim 1 ~~or 2~~ wherein the enclosure further comprises a seal ~~sealing means (16)~~ interposed between the first and second housing members ~~(4, 6)~~, said ~~sealing means~~ providing the hermetic seal.

5. (*Currently Amended*) A method according to claim 4 wherein the ~~sealing means (16)~~ comprises at least one of a metal, a eutectic alloy, an elastomer and an adhesive.

6. (*Currently Amended*) A method according to claim 5 wherein the ~~sealing means (16)~~ comprises an indium seal.

7. (*Currently Amended*) A method according to claim 5 wherein the ~~sealing means (16)~~ comprises a compressible elastomeric ring.

8. (*Currently Amended*) A method according to ~~any of claims 4 — 7~~ claim 4 and further comprising the intermediate step of applying the ~~sealing means (16)~~ to at least one of the first and second housing members (4, 6) prior to engaging the first and second housing members ~~(4, 6)~~.

9. (*Currently Amended*) A method according to ~~any of claims 4 — 8~~ claim 4 wherein the enclosure ~~(2)~~ further comprises a spacer means (18) disposed adjacent the ~~sealing means (16)~~ so as to preclude over-compression of the ~~sealing means (16)~~ during the engagement step.

10. (*Currently Amended*) A method according to ~~any of claims 4-9~~claim 4 wherein the enclosure (2) comprises a ~~retainer~~retaining means disposed adjacent the ~~sealing means (16)~~ so as to retain the ~~sealing means (16)~~.

11. (*Currently Amended*) A method according to ~~any of the preceding claims~~claim 1 wherein the second housing member (6) comprises a first substantially transmissive optical element (20) and an engagement portion adapted to engage with the first housing member (4).

12. (*Currently Amended*) A method according to claim 11 ~~when dependent on any of claims 4-10~~ wherein the hermetic seal is provided between the first housing member (4) and the first optical element (20) via ~~the~~a ~~sealing means (16)~~.

13. (*Currently Amended*) A method according to claim 11 ~~or 12~~ wherein the second housing member (6) is adapted to receive a second substantially transmissive optical element (22).

14. (*Currently Amended*) A method according to ~~any of the preceding claims~~claim 1 wherein the controlled atmosphere comprises an inert gas.

15. (*Original*) A method according to claim 14 wherein the inert gas comprises at least one of nitrogen and argon.

16. (*Currently Amended*) A method according to ~~any of the preceding claims~~claim 1 wherein the controlled atmosphere comprises a vacuum.

17. (*Currently Amended*) A method according to ~~any of the preceding claims~~claim 1 wherein the step of engaging the first and second housing members ~~(4, 6)~~ includes the step of bonding said housing members.

18. (*Original*) A method according to claim 17 wherein the bonding step comprises one of friction welding and friction soldering.

19. (*Currently Amended*) A method according to ~~any of the preceding claims~~claim 1 wherein the first and second housing members ~~(4, 6)~~ comprise metal cylinders having a substantially circular cross section.

20. (*Cancelled*)

21. (*Currently Amended*) An electronic device comprising an electronic element ~~(8)~~, a first housing member ~~(4)~~, and a second housing member ~~(6)~~, the first and second housing members ~~(4, 6)~~ having an engagement hermetic seal there between so as to define around the electronic element ~~(8)~~ an hermetic enclosure ~~(2)~~ having a controlled atmosphere within.

22. (*Currently Amended*) An electronic device comprising an electronic element~~(8)~~, a first housing member~~(4)~~, and a second housing member~~(6)~~, the first and second housing members ~~(4, 6)~~ defining an hermetic enclosure~~(2)~~,

wherein the electronic element ~~(8)~~ is located within the hermetic enclosure ~~(2)~~ and wherein the hermetic enclosure ~~(2)~~ is formed by engaging the first and second housing members ~~(4, 6)~~ in a controlled atmosphere such that an engagement hermetic seal is provided there between.

23. (*Currently Amended*) An electronic device according to claim 21 ~~or 22~~ wherein the engagement hermetic seal comprises an interference seal between the first and second housing members~~(4, 6)~~.

24. (*Currently Amended*) An electronic device according to claim 21 ~~or 22~~ wherein the engagement hermetic seal comprises a friction weld between the first and second housing members ~~(4, 6)~~.

25. (*Currently Amended*) An electronic device according to claim 21 ~~or 22~~ and further comprising a seal~~sealing means (16)~~ interposed between the first and second housing members ~~(4, 6)~~, said ~~sealing means (16)~~ providing the engagement hermetic seal.

26. (*Currently Amended*) An electronic device according to claim 25 wherein the first and second housing members ~~(4, 6)~~ are held in engagement by an interference fit there between.

27. (*Currently Amended*) An electronic device according to claim 25 ~~or 26~~ wherein the ~~sealing means (16)~~ comprises at least one of a metal, a eutectic alloy, an elastomer and an adhesive.

28. (*Currently Amended*) An electronic device according to claim 27 wherein the ~~sealing means (16)~~ comprises an indium seal.

29. (*Currently Amended*) An electronic device according to claim 27 wherein the ~~sealing means (16)~~ comprises a compressible elastomeric ring.

30. (*Currently Amended*) An electronic device according to ~~any of claims 25—29~~claim 25 wherein the enclosure (2) further comprises a spacer means (18) disposed adjacent the ~~sealing means (16)~~ so as to preclude over-compression of the ~~sealing means (16)~~.

31. (*Currently Amended*) An electronic device according to ~~any of claims 25—30~~claim 25 wherein the enclosure (2) comprises a retainer~~retaining means~~ disposed adjacent the ~~sealing means (16)~~ so as to retain the ~~sealing means (16)~~.

32. (*Currently Amended*) An electronic device according to ~~any of claims 21—31~~claim 21 wherein the second housing member (6) comprises a first substantially transmissive optical element (20) and an engagement portion adapted to engage with the first housing member (4).

33. (*Currently Amended*) An electronic device according to claim 32 wherein the first optical element ~~(20)~~ comprises a lens.

34. (*Currently Amended*) An electronic device according to claim 32 ~~or 33~~ wherein the first optical element ~~(20)~~ comprises at least one of chalcogenide glass, silicon and germanium.

35. (*Currently Amended*) An electronic device according to ~~any of claims 32—34~~claim 32 ~~when dependent on any of claims 25—31~~ wherein the engagement hermetic seal is provided between the first housing member ~~(4)~~ and the first optical element ~~(20)~~ via ~~the sealing means (16)~~.

36. (*Currently Amended*) An electronic device according to ~~any of claims 32—35~~claim 32 wherein the second housing member ~~(6)~~ includes a second substantially transmissive optical element ~~(22)~~.

37. (*Currently Amended*) An electronic device according to claim 36 wherein the second optical element ~~(22)~~ comprises chalcogenide glass.

38. (*Currently Amended*) An electronic device according to ~~any of claims 21—37~~claim 21 wherein the controlled atmosphere comprises an inert gas.

39. (*Original*) An electronic device according to claim 38 wherein the inert gas comprises at least one of nitrogen and argon.

40. (*Currently Amended*) An electronic device according to ~~any of claims 21 — 39~~claim
21 wherein the controlled atmosphere comprises a vacuum.

41-55. (*Cancelled*)

56. (*New*) An electronic device having a thermal detector housed within an hermetic enclosure comprising mutually inter-engaged first and second housing members, the second housing member comprising a first substantially transmissive optical element; wherein said housing members enclose the thermal detector within a controlled atmosphere and provide an engagement hermetic seal around said thermal detector.